

**Final
Site-Specific Field Sampling Plan Attachment
Site Investigation at the Old Hospital, Parcel 95(7)**

**Fort McClellan
Calhoun County, Alabama**

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**Delivery Order CK005
Contract No. DACA21-96-D-0018
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List of Acronyms

ADEM	Alabama Department of Environmental Management
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESAS	Corps of Engineers South Atlantic Savannah
CLP	Contract Laboratory Program
CSEM	conceptual site exposure model
DOD	U.S. Department of Defense
DQO	data quality objective
EBS	environmental baseline survey
EPA	U.S. Environmental Protection Agency
ESE	Environmental Sciences and Engineering
FTMC	Fort McClellan
GPS	global positioning system
IDW	investigation-derived waste
IT	IT Corporation
msl	mean sea level
PSSC	potential site-specific chemical(s)
PID	photoionization detector
QA/QC	quality assurance/quality control
QAP	installation-wide quality assurance plan
RCRA	Resource Conservation and Recovery Act
SAP	installation-wide sampling and analysis plan
SFSP	site-specific field sampling plan
SHP	installation-wide safety and health plan
SSHP	site-specific safety and health plan
SI	site investigation
SVOC	semivolatile organic compound
USACE	U.S. Army Corps of Engineers
UST	underground storage tank
WMP	site-specific waste management plan
WP	installation-wide work plan

Executive Summary

In accordance with Contract No. DACA21-96-D-0018, Delivery Order CK005, IT Corporation (IT) will conduct a site investigation (SI) at Fort McClellan, Calhoun County, Alabama, to determine the presence or absence of potential site-specific chemicals at the Old Hospital, Parcel 95(7). This site-specific field sampling plan (SFSP) will provide technical guidance for sampling activities at the Old Hospital site.

The Old Hospital was located in the central part of the Main Post. The site was a medical facility that provided medical care to patients from the early 1940s to 1955. According to the environmental baseline survey (EBS), the Old Hospital covered approximately 100 acres, contained 110 buildings, and had 4.5 miles of catwalks designed to provide access throughout the complex. The Old Hospital ceased operation in 1955 and new buildings were constructed in 1988 at the site. The newer buildings are used mostly for housing military personnel and office storage. In addition to the buildings constructed in 1988, some of the older buildings constructed in 1941 are still present at the site. These original buildings are located in the southern section of the site. Conflicting documentation in the EBS (Environmental Science and Engineering, Inc. [ESE], 1998) indicates the Old Hospital comprised 13 acres and in a separate section, 100 acres. The approximate acreage was recalculated by ESE on July 20, 1998. The approximate acreage was determined to be 64.5 acres.

IT will collect 48 subsurface soil samples, 20 surface soil samples, 6 surface water samples, 6 sediment samples, and 3 depositional soil samples to meet the objectives of the SI. Chemical analyses of the samples collected during the field program will include volatile organic compounds, semivolatile organic compounds, metals, chlorinated pesticides, polychlorinated biphenyls, chlorinated herbicides, and organophosphorus pesticides. Additionally, the sediment samples will be analyzed for total organic carbon and grain size. Results from these analyses will be compared with site-specific screening levels specified in the installation-wide work plan (WP), and regulatory agency guidelines.

This SFSP attachment to the installation-wide sampling and analysis plan (SAP) (IT, 1998a) for the Old Hospital site will be used in conjunction with the site-specific safety and health plan (SSHP), and the installation-wide WP (IT, 1998b) and SAP. The SAP includes the installation-wide safety and health plan, waste management plan, and quality assurance plan. Site-specific hazard analyses are included in the SSHP.

1.0 Project Description

1.1 Introduction

The U.S. Army is conducting studies of the environmental impact of suspected contaminants at Fort McClellan (FTMC) in Calhoun County, Alabama, under the management of the U.S. Army Corps of Engineers (USACE)-Mobile District. The USACE has contracted IT Corporation (IT) to provide environmental services for the site investigation (SI) of the Old Hospital, Parcel 95(7), under Delivery Order CK005, Contract No. DACA21-96-D-0018.

This site-specific field sampling plan (SFSP) attachment to the installation-wide sampling and analysis plan (SAP) (IT, 1998a) for FTMC has been prepared to provide technical guidance and rationale for sample collection and analysis at the Old Hospital, Parcel 95(7). IT will collect samples at this site as part of a SI effort. The results of this effort will determine whether there are contaminants at this site in concentrations high enough to warrant further remedial investigation and/or action. The SFSP will be used in conjunction with the site-specific safety and health plan (SSHP) developed for the Old Hospital, and the installation-wide work plan (WP) (IT, 1998b), and SAP. The SAP includes the installation-wide safety and health plan (SHP) and quality assurance plan (QAP).

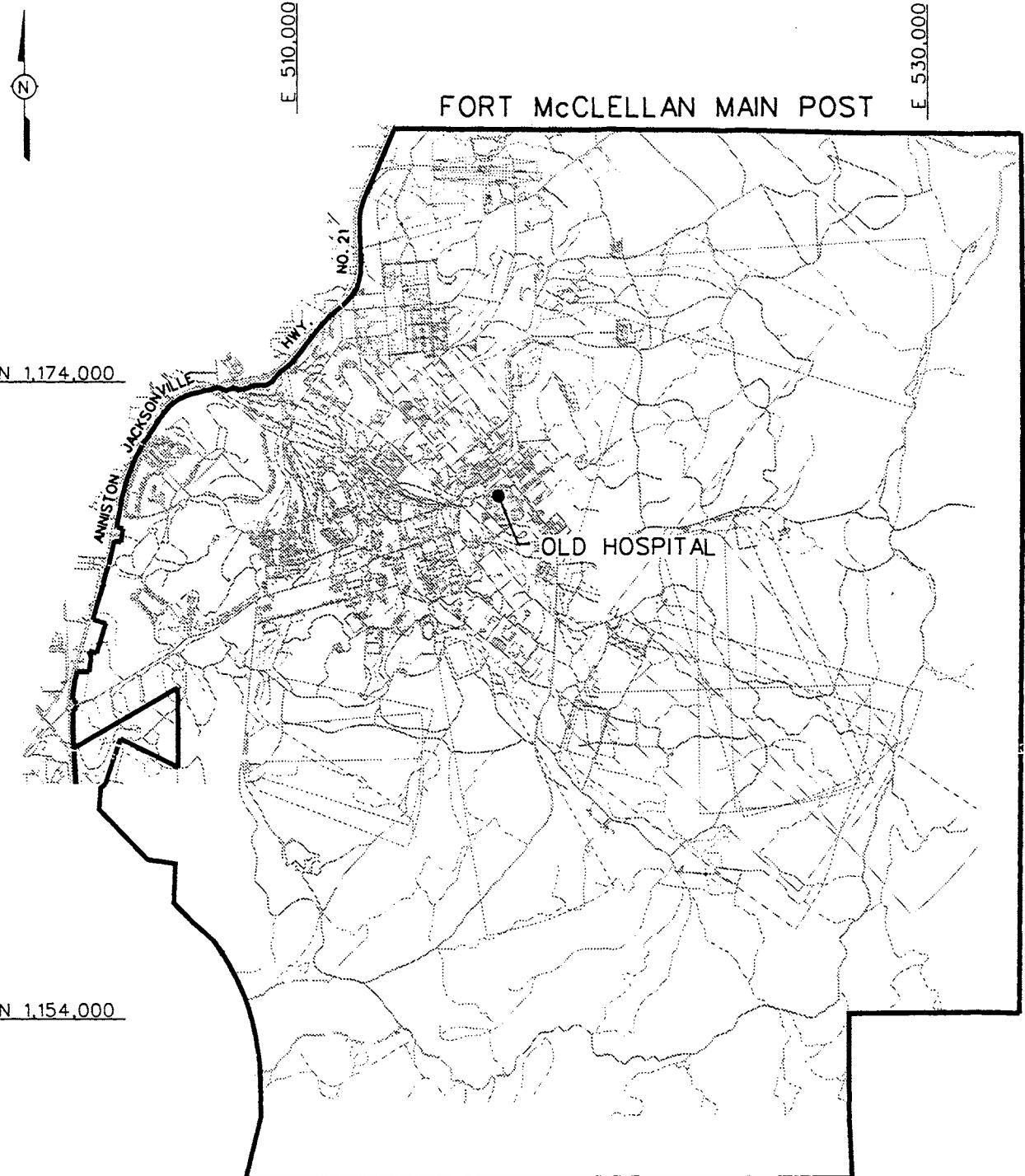
1.2 Site Description

FTMC is a U.S. Army installation located in Calhoun County, Alabama, that occupies approximately 45,679 acres. The Main Post installation is bounded on the south and west by the city of Anniston, and on the northwest by the city of Weaver. Pelham Range is 5 miles due west of the Main Post installation and adjoins Anniston Army Depot along its northern boundary. Adjoining the Main Post installation to the east is the Choccolocco Corridor, which provides an access corridor connecting the installation to the Talladega National Forest.

The Old Hospital is located in the central part of the Main Post (Figure 1-1). The Old Hospital is bounded by 20th Street to the north, 3rd Avenue to the east, 22nd Street to the south, and 6th Avenue to the west (Figure 1-2). Elevation ranges from 805 feet mean sea level (msl) in the northeastern section of the site and slopes towards the southwest to 775 feet msl. The Old Hospital was built between 1941 and 1943, covered approximately 100 acres, contained 110 buildings, and had 4.5 miles of catwalks designed to provide access throughout the complex. The Old Hospital was reported to have been renovated in 1951 to accommodate the Specialized Treatment Center of the Third Army, concerned with treating chest diseases. The Old Hospital

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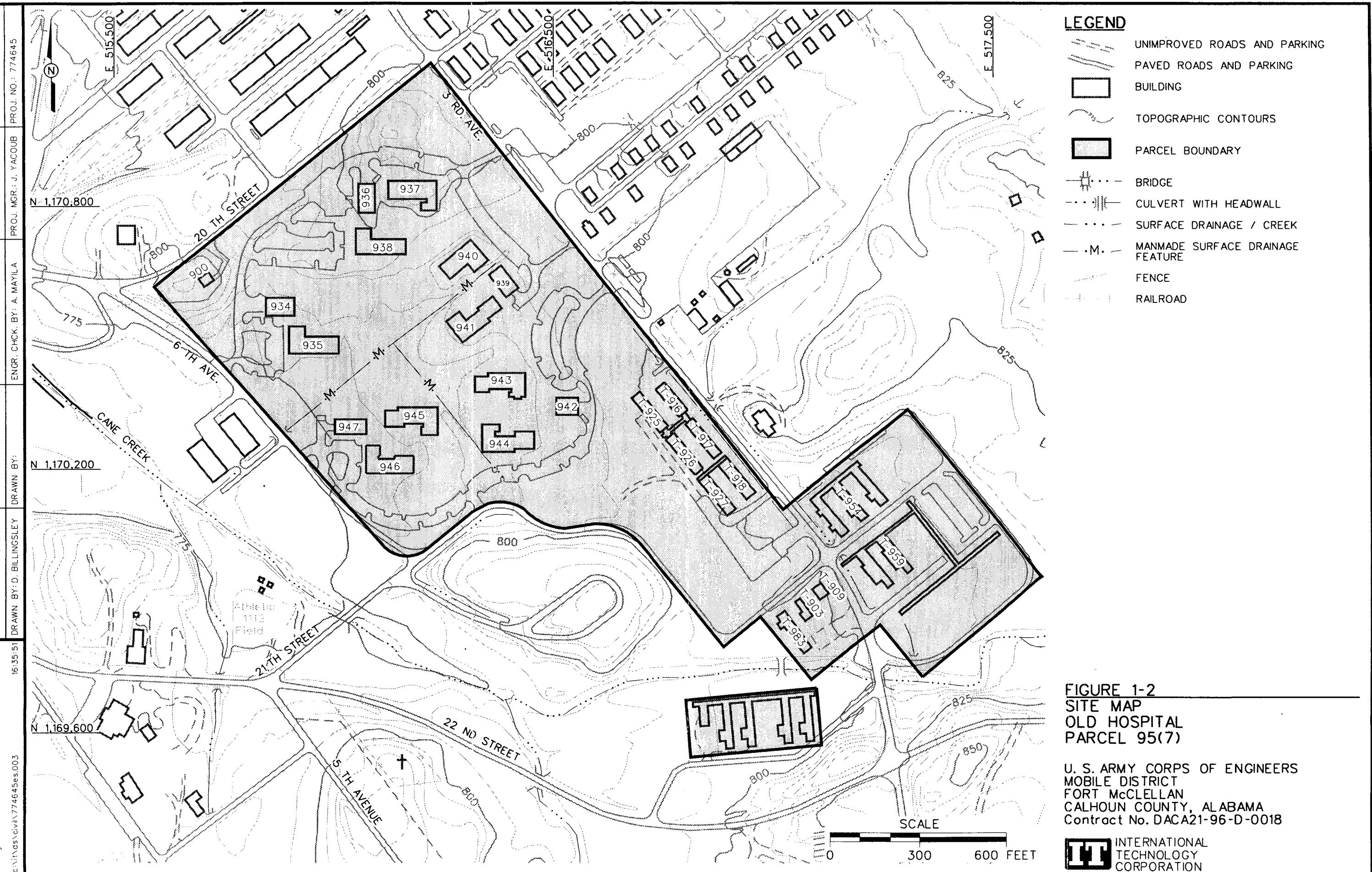
FORT McCLELLAN BOUNDARY

FIGURE 1-1
SITE LOCATION MAP
OLD HOSPITAL
PARCEL 95(7)

U. S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT
FORT McCLELLAN
CALHOUN COUNTY, ALABAMA
Contract No. DACA21-96-D-0018

SCALE
0 5000 10000 FEET

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was connected to the sanitary sewer system. A series of stormwater drainage ditches located along the southern border of the site appears to have coursed through the complex and discharged into Cane Creek, which flows along the western side of the site. No information is available on the handling, storage, or disposal of generated hazardous substances at the site. The standard disposal practice for hazardous wastes during the time the Old Hospital was active was on-post incineration. The disposal method is assumed to have been implemented since there was no apparent evidence of hazardous waste disposal at the site (Environmental Science and Engineering, Inc. [ESE], 1998).

The Old Hospital ceased operation in 1955 and new buildings were constructed in 1988 at the site. The buildings are used for housing military personnel and office storage. Some of the buildings constructed in 1941 still exist in the southern section of the site (Figure 1-2).

Conflicting documentation in the EBS indicates the Old Hospital comprised 13 acres and in a separate section of the EBS, 100 acres were reported. The approximate acreage was recalculated by ESE on July 20, 1998. The approximate acreage was determined to be 64.5 acres.

An aerial photograph with imagery of the former buildings and catwalks and existing buildings constructed in 1941 and 1988 is provided in Chapter 4.0. To IT's knowledge, no previous environmental studies have been done at this site.

The soil type at the Old Hospital is classified as Rarden Series. These soils are moderately well drained, strongly acidic soils. They generally occur on wide shale ridges. Rarden soils are developed from the residuum of shale and fine-grained, platy sandstone or limestone. In eroded areas, the surface soil is brown silt loam. The subsoil is yellowish-red clay or silty clay. Concretions and fragments of sandstone, up to one-half inch in diameter, are commonly found in the soil. Rarden soils are severely eroded and erosion has removed all or nearly all of the original silt loam surface soil. Infiltration is medium, permeability is slow and capacity for available moisture is low (U.S. Department of Agriculture, 1961). Depth to water is 20 feet or greater and depth to bedrock is 1.5 to 4 feet below land surface.

1.3 Scope of Work

The scope of work for activities associated with the SI at the Old Hospital, as specified in the statement of work (USACE, 1998), includes the following tasks:

- Develop the SFSP attachment.

- Develop the SSHP attachment.
- Collect 48 subsurface soil samples, 20 surface soil samples, 6 surface water samples, 6 sediment samples, and 3 depositional soil samples to determine whether potential site-specific chemicals (PSSC) are present at the Old Hospital and provide data to determine future planned corrective measures and closure activities.

At completion of the field activities and sample analyses, draft and final SI summary reports will be prepared to evaluate the absence or presence of PSSC at this site, and to recommend further action, if appropriate.

2.0 Summary of Existing Environmental Studies

ESE conducted an environmental baseline survey (EBS) to document current environmental conditions of all FTMC property (ESE, 1998). The study identified sites that, based on available information, have no history of contamination and comply with U.S. Department of Defense (DOD) guidance on fast track cleanup at closing installations. The EBS also provides a baseline picture of FTMC properties by identifying and categorizing the properties by seven criteria.

1. Areas where no storage, release, or disposal (including migration) has occurred.
2. Areas where only storage has occurred.
3. Areas of contamination below action levels.
4. Areas where all necessary remedial actions have been taken.
5. Areas of known contamination with removal and/or remedial action underway.
6. Areas of known contamination where required response actions have not been taken.
7. Areas that are not evaluated or require further evaluation.

The EBS was conducted in accordance with the Community Environmental Response Facilitation Act (CERFA) (CERFA-Public Law 102-426) protocols and DOD policy regarding contamination assessment. Record searches and reviews were performed on all reasonably available documents from FTMC, ADEM, EPA Region IV, and Calhoun County, as well as a database search of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-regulated substances, petroleum products, and Resource Conservation and Recovery Act (RCRA)-regulated facilities. Available historic maps and aerial photographs were reviewed to document historic land uses. Personal and telephone interviews of past and present FTMC employees and military personnel were conducted. In addition, visual site inspections were conducted to verify conditions of specific property parcels. There are not any records available that indicate previous environmental studies have been completed at this site. The Old Hospital was identified as a Category 7 site, a site where further evaluation was needed.

3.0 Site-Specific Data Quality Objectives

3.1 Overview

The data quality objective (DQO) process (EPA, 1993) is followed to evaluate data requirements and to support the decision-making process associated with future action at the Old Hospital.

The DQO process, as applied to the Old Hospital SI, is described in more detail in Section 2.2 of the WP (IT, 1998b). Table 3-1 provides a summary of the factors used to determine the sampling quantity and procedures necessary to meet the objectives of the SI and to establish a basis for future action at the site. The intended data users and available data related to the SI at the Old Hospital, presented in Table 3-1, have been used to formulate a site-specific conceptual model to develop this SFSP. The conceptual model ensures that the objectives of the SI are met and a basis for future action at the site is established. This SFSP, along with the necessary companion documents, has been designed to provide the regulatory agencies with sufficient detail to reach a determination as to the adequacy of the scope of work. The program has also been designed to provide defensible information required to confirm or deny the existence and nature of residual chemical contamination in site media.

The samples will be analyzed using EPA SW-846 methods, including Update III Methods where applicable, as presented in Chapter 4.0 in this SFSP and Table 6-1 in the QAP. Data will be reported and evaluated in accordance with Corps of Engineers South Atlantic Savannah (CESAS) Level B criteria (USACE, 1994) and the stipulated requirements for the generation of definitive data (Section 3.1.2 of the QAP). The chemical data will be reported via hard copy data packages by the laboratory using Contract Laboratory Program (CLP)-like forms. These packages will be validated in accordance with EPA National Functional Guidelines by Level III criteria.

3.2 Data Users and Available Data

The intended data users and available data related to the SI at the Old Hospital, presented in Table 3-1, have been used to formulate a site-specific conceptual model. This conceptual model was developed to support the development of this SFSP, which is necessary to meet the objectives of these activities and to establish a basis for future action at the site. The data users for information generated during field activities are primarily EPA, USACE, ADEM, FTMC, and the USACE supporting contractors. This SFSP, along with the necessary companion documents, has been designed to provide the regulatory agencies with sufficient detail to reach a determination as to the adequacy of the scope of work.

Table 3-1

Summary of Data Quality Objectives
Old Hospital, Parcel 95(7)
Fort McClellan, Calhoun County, Alabama

Potential Data Users	Available Data	Conceptual Site Model	Media of Concern	Data Uses and Objectives	Data Types	Analytical Level	Data Quantity
EPA, ADEM USACE, DOD FTMC, IT Corporation Other Contractors Possible future land users	None	Contaminant Source Unknown Migration Pathways Groundwater infiltration, and surface water runoff Depositional Soil Potential Receptors groundkeepers, construction workers, on-site and off-site residents, youthful visitor PSSC Diesel Fuel, Waste Oil, Heating Oil,	Subsurface Soil Surface Water Sediment Depositional Soil Potential Receptors groundkeepers, construction workers, on-site and off-site residents, youthful visitor PSSC Diesel Fuel, Waste Oil, Heating Oil,	SI to confirm the presence or absence of PSSC in the site media. Definitive quality data for future decision making	Subsurface soil TCL VOCs, TCL SVOCs, TAL Metals Surface Soil TCL VOCs, TCL SVOCs, TAL Metals Surface Water TCL VOCs, TCL SVOCs, TAL Metals Sediment TCL VOCs, TCL SVOCs, TAL Metals TOC, Grain Size Depositional Soil TCL VOCs, TCL SVOCs, TAL Metals	Definitive + CESAS Level B data packages Definitive + CESAS Level B data packages	48 direct-push soil samples + QC 20 direct-push soil samples + QC 6 locations + QC 6 locations + QC 3 locations + QC

ADEM - Alabama Department of Environmental Management.

CESAS - Corps of Engineers South Atlantic Savannah.

DOD - U.S. Department of Defense.

EPA - U.S. Environmental Protection Agency.

FTMC - Fort McClellan.

PSSC - Potential site-specific chemicals.

VOC - Volatile organic compound.

SVOC - Semivolatile organic compound.

TAL - Target analyte list.

TCL - Target compound list.

TOC - Total organic carbon.

USACE - U.S. Army Corps of Engineers.

3.3 Conceptual Site Exposure Model

The CSEM provides the basis for identifying and evaluating the potential risks to human health in the risk assessment. Graphically presenting possible pathways by which a potential receptor may be exposed, including sources, release and transport pathways, and exposure routes, facilitates consistent and comprehensive evaluation of risk to human health, and helps to ensure that potential pathways are not overlooked. The elements necessary to construct a complete exposure pathway and develop the CSEM include:

- Source (i.e., contaminated environmental) media
- Contaminant release mechanisms
- Contaminant transport pathways
- Receptors
- Exposure pathways.

Contaminant release mechanisms and transport pathways are not relevant for direct receptor contact with a contaminated source medium.

Parcel 95 is the former hospital and consisted of 110 medical buildings connected by a series of catwalks. The former hospital was connected to the sanitary sewer system and a series of stormwater drainage ditches appear to have coursed through the hospital complex and drained into Cane Creek. No information is available on the handling, storage, or disposal of generated hazardous substances at the complex. Onpost incineration was the standard disposal practice for hazardous wastes during the time the former hospital was active. This disposal method is assumed to have been implemented since there is no apparent evidence of hazardous waste disposal on the site.

Currently, there is no visible evidence of the former hospital buildings and the area now supports several dormitory-style short-term residential buildings. The current site use is best described as residential and receptors would include the on-site resident, groundskeeper, and construction worker. Other receptor scenarios considered but not included under current site use are:

- Venison or fish consumption: The site does not currently support hunting or fishing.
- Recreational site user: The on-site resident scenario provides a more conservative assessment than a temporary visitor.

The future for this site calls for continued use of a short-term residential area (FTMC, 1997). The future site user is best described as residential and the receptors will again include the on-site resident groundskeeper and construction worker. Other receptors considered but not included are the same as presented above. The contaminant release and transport mechanisms, source and exposure media, receptors and exposure pathways are summarized in Figure 3-1.

Assessment of potential ecological risk associated with sites or parcels (e.g., surface water and sediment sampling, specific ecological assessment methods, etc.) will be addressed in a separate document to be issued as the Habitat-Specific Screening Ecological Risk Assessment Work Plan.

3.4 Decision-Making Process, Data Uses, and Needs

The decision-making process consists of a seven-step process that is presented in detail in Sections 3.2 and 4.3 of the WP and will be followed during the SI at the Old Hospital. Data uses and needs are summarized in Table 3-1.

3.4.1 Risk Evaluation

Confirmation of contamination at the Old Hospital will be based upon comparing detected site contaminants to site-specific screening levels developed in the WP. EPA definitive data with CESAS Level B data packages will be used to achieve detection limits sufficient to determine whether the established guidance criteria are exceeded in site media. Definitive data will be adequate for confirming the presence of site contamination and for supporting additional decision-making steps, such as remedial action and risk assessment, if necessary.

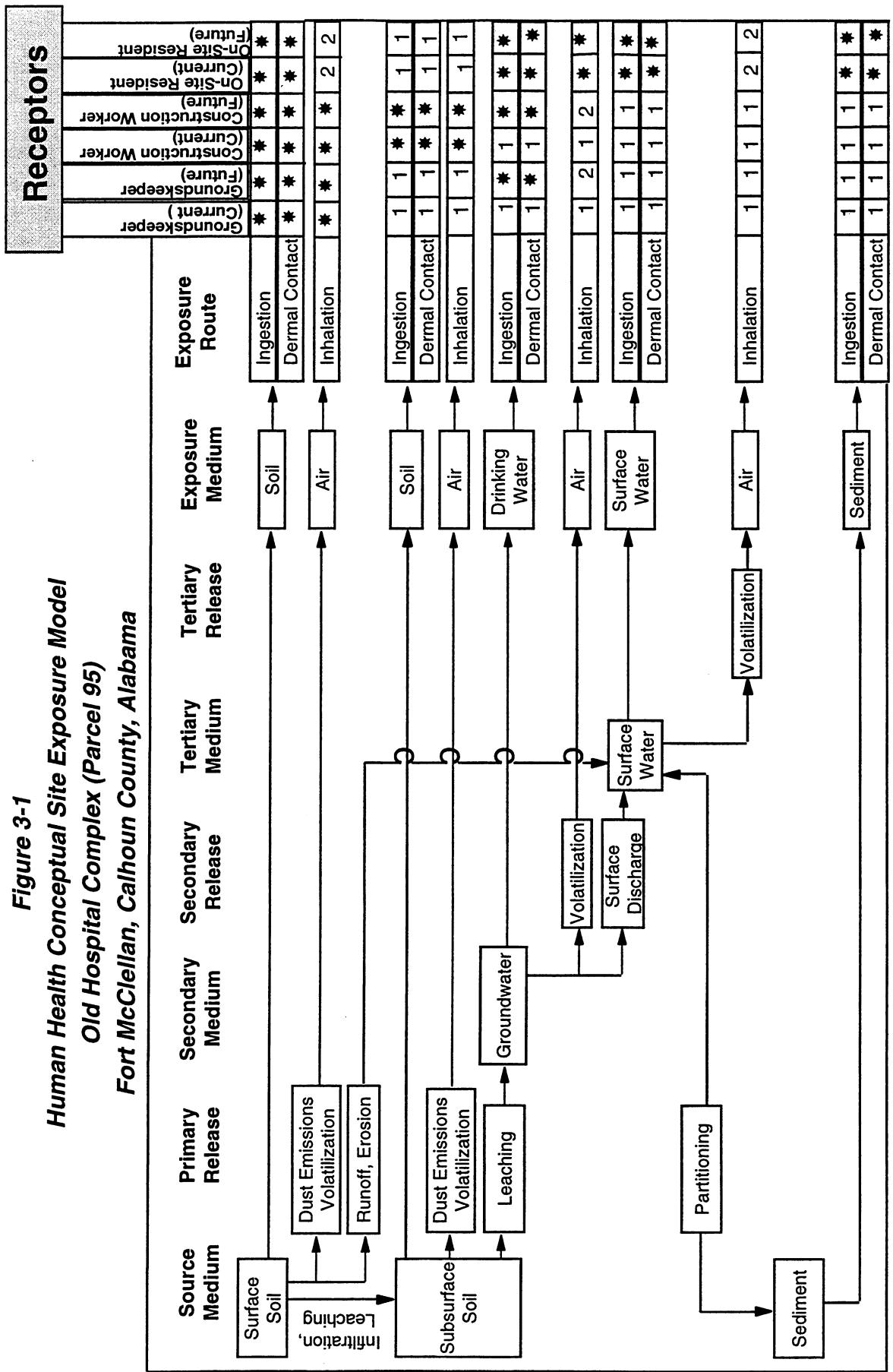
3.4.2 Data Types and Quality

Soil, groundwater, surface water, and sediment will be sampled and analyzed to meet the objectives of the SI at the Old Hospital. Quality assurance/quality control (QA/QC) samples will be collected for all sample types as described in Chapter 4.0 of this SFSP. Samples will be analyzed by EPA-approved SW-846 methods, where available; comply with EPA definitive data requirements; and be reported using hard copy data packages. In addition to meeting the quality needs of this SI, data analyzed at this level of quality are appropriate for all phases of site characterization, remedial investigation, and risk assessment.

3.4.3 Precision, Accuracy, and Completeness

Laboratory requirements of precision, accuracy, and completeness for this SI are provided in Chapter 9.0 of the QAP.

Figure 3-1
Human Health Conceptual Site Exposure Model
Old Hospital Complex (Parcel 95)
Fort McClellan, Calhoun County, Alabama



4.0 Field Activities

4.1 Utility Clearances

Prior to performing any intrusive sampling, a utility clearance will be performed at all locations where soil samples will be collected, using the procedure outlined in Section 4.2.6 of the SAP. The site manager will mark the proposed locations with stakes, coordinate with the installation to clear the proposed locations for utilities, and obtain digging permits. Once the locations are cleared, the stakes will be labeled as cleared.

4.2 Environmental Sampling

The environmental sampling program during the SI at the Old Hospital includes the collection of surface and subsurface soil, surface water, sediment, and depositional soil samples for chemical analysis. These samples will be collected and analyzed to provide data for characterizing the site to determine the environmental condition of the site and any further action to be conducted at the site.

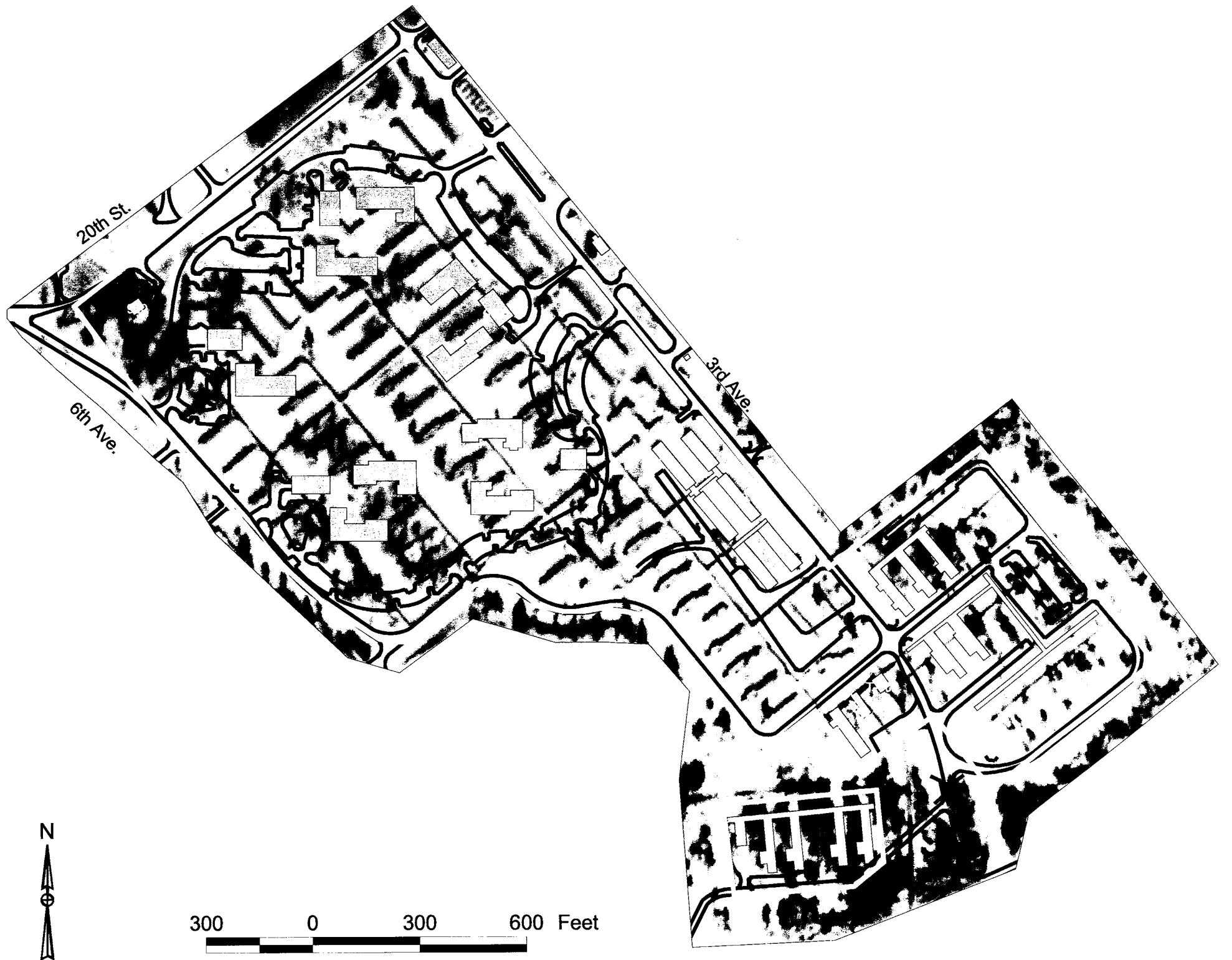
Aerial photographs were reviewed from 1949 and 1954. Based on the aerial photographs (Figure 4-1), the northern portion of the Old Hospital site has been completely razed and rebuilt. It appears that none of the Old Hospital buildings on the northern portion of the site that were present in 1954 exist at the site today. There is no record of a former incinerator at this site and no apparent evidence of hazardous waste disposal. Because current surface soils do not reflect conditions present during active use of the Old Hospital, no surface soil samples will be collected in the northern portion of the site. Because there are not any records of underground storage tanks (UST) and not any apparent underground contamination sources, groundwater samples will not be collected. If contamination is found to be present in soil samples, groundwater sampling will be proposed for this site.

The sample locations, media, and rationale are summarized in Table 4-1. Samples will be submitted for laboratory analyses of site-related parameters listed in Section 4.5. The sample designations and QA/QC sample quantities are shown in Tables 4-2 and 4-3.

Figure 4-1

Old Hospital Area (Parcel 95)

Aerial Photography from 1954
Current Roads and Buildings
from 1994 Base Map



Parcel 95 Boundary
Buildings
Roads

Source: U.S. EPA, 1990.
Installation Assessment, Army Closure
Program, Fort McClellan, Anniston,
Alabama (TS-PIC-89334).
Environmental Photographic
Interpretation Center,
Environmental Monitoring
System Laboratory.

U.S. Army Corp of Engineers
Mobile District
Fort McClellan
Calhoun County, Alabama
Contract No. DACA21-96-D-0018

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Table 4-1

**Site Sampling Rationale
Old Hospital, Parcel 95(7)
Fort McClellan, Calhoun County, Alabama**

(Page 1 of 3)

Table 4-1

**Site Sampling Rationale
Old Hospital, Parcel 95(7)
Fort McClellan, Calhoun County, Alabama**

(Page 2 of 3)

Table 4-1

Site Sampling Rationale
Old Hospital, Parcel 95(7)
Fort McClellan, Calhoun County, Alabama

(Page 3 of 3)

Sample Location	Sample Media	Sampling Location Rationale
FTA-95-GP43	SURFACE SOIL SUBSURFACE SOIL	Sample locations are proposed at former hospital buildings and metal catwalk areas based on the aerial photograph of the former hospital in 1954. Samples will be collected at approximately 200 ft intervals.
FTA-95-GP44	SURFACE SOIL SUBSURFACE SOIL	Sample locations are proposed at former hospital buildings and metal catwalk areas based on the aerial photograph of the former hospital in 1954. Samples will be collected at approximately 200 ft intervals.
FTA-95-GP45	SURFACE SOIL SUBSURFACE SOIL	Sample locations are proposed at former hospital buildings and metal catwalk areas based on the aerial photograph of the former hospital in 1954. Samples will be collected at approximately 200 ft intervals.
FTA-95-GP46	SURFACE SOIL SUBSURFACE SOIL	Sample locations are proposed at former hospital buildings and metal catwalk areas based on the aerial photograph of the former hospital in 1954. Samples will be collected at approximately 200 ft intervals.
FTA-95-GP47	SURFACE SOIL SUBSURFACE SOIL	Sample locations are proposed at former hospital buildings and metal catwalk areas based on the aerial photograph of the former hospital in 1954. Samples will be collected at approximately 200 ft intervals.
FTA-95-GP48	SURFACE SOIL SUBSURFACE SOIL	Sample locations are proposed at former hospital buildings and metal catwalk areas based on the aerial photograph of the former hospital in 1954. Samples will be collected at approximately 200 ft intervals.
FTA-95-SW/SD01	SURFACE WATER SEDIMENT	Sample location is a potential downgradient sink for the contaminants in question. Evidence of contaminant mobility at any point within the site would likely be integrated at this location.
FTA-95-SW/SD02	SURFACE WATER SEDIMENT	Sample location is a potential downgradient sink for the contaminants in question. Evidence of contaminant mobility at any point within the site would likely be integrated at this location.
FTA-95-SW/SD03	SURFACE WATER SEDIMENT	Sample location is a potential downgradient sink for the contaminants in question. Evidence of contaminant mobility at any point within the site would likely be integrated at this location.
FTA-95-SW/SD04	SURFACE WATER SEDIMENT	Sample location is a potential downgradient sink for the contaminants in question. Evidence of contaminant mobility at any point within the site would likely be integrated at this location.
FTA-95-SW/SD05	SURFACE WATER SEDIMENT	Sample location is a potential downgradient sink for the contaminants in question. Evidence of contaminant mobility at any point within the site would likely be integrated at this location.
FTA-95-SW/SD06	SURFACE WATER SEDIMENT	Sample location is a potential downgradient sink for the contaminants in question. Evidence of contaminant mobility at any point within the site would likely be integrated at this location.
FTA-95-DEPO1	DEPOSITIONAL SOIL	Sampling location is the most probable point of exit from the site for surface water runoff. Evidence of contaminant mobility from the northeast section of the site would likely be integrated at this location.
FTA-95-DEPO2	DEPOSITIONAL SOIL	Sampling location is the most probable point of exit from the site for surface water runoff. Evidence of contaminant mobility from the central portion of the site would likely be integrated at this location.
FTA-95-DEPO3	DEPOSITIONAL SOIL	Sampling location is the most probable point of exit from the site for surface water runoff. Evidence of contaminant mobility at any point would likely be integrated at this location.

Table 4-2

Surface and Subsurface Soil Sample Designations and QA/QC Sample Quantities
Former Hospital, Parcel 95(7)
Fort McClellan, Calhoun County, Alabama

(Page 1 of 3)

Sample Location	Sample Designation	QA/QC Samples			Analytical Suite
		Field Duplicates	Field Splits	MS/MSD	
FTA-95-GP01	FTA-GP01-DS-AD0001-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP02	FTA-GP02-DS-AD0002-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP03	FTA-GP03-DS-AD0003-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP04	FTA-GP04-DS-AD0004-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP05	FTA-GP05-DS-AD0005-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP06	FTA-GP06-DS-AD0006-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP07	FTA-GP07-DS-AD0007-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP08	FTA-GP08-DS-AD0008-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP09	FTA-GP09-DS-AD0009-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP10	FTA-GP10-DS-AD0010-REG	a	FTA-GP10-DS-AD0011-FD	FTA-GP10-DS-AD0012-FS	TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP11	FTA-GP11-DS-AD0013-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP12	FTA-GP12-DS-AD0014-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP13	FTA-GP13-DS-AD0015-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP14	FTA-GP14-DS-AD0016-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP15	FTA-GP15-DS-AD0017-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP16	FTA-GP16-DS-AD0018-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP17	FTA-GP17-DS-AD0019-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP18	FTA-GP18-DS-AD0020-REG	a			TCL VOCs, TCL SVOCs, TAL Metals

Table 4-2

Surface and Subsurface Soil Sample Designations and QA/QC Sample Quantities
Former Hospital, Parcel 95(7)
Fort McClellan, Calhoun County, Alabama

(Page 2 of 3)

Sample Location	Sample Designation	QA/QC Samples			Analytical Suite
		Field Duplicates	Field Splits	MS/MSD	
FTA-95-GP19	FTA-GP19-DS-AD0021-REG	a		FTA-GP19-DS-AD022-MS FTA-GP19-DS-AD022-MSD	TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP20	FTA-GP20-DS-AD0022-REG	a	FTA-GP20-DS-AD0023-FD	FTA-GP20-DS-AD0024-FS	TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP21	FTA-GP21-DS-AD0025-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP22	FTA-GP22-DS-AD0026-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP23	FTA-GP23-DS-AD0027-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP24	FTA-GP24-DS-AD0028-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP25	FTA-GP25-DS-AD0029-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP26	FTA-GP26-DS-AD0030-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP27	FTA-GP27-DS-AD0031-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP28	FTA-GP28-DS-AD0032-REG	a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP29	FTA-GP29-SS-AD0034-REG FTA-GP29-DS-AD0033-REG	0-1 a	FTA-GP29-DS-AD0035-FD	FTA-GP29-DS-AD0036-FS FTA-GP30-SS-AD0039-FD FTA-GP30-DS-AD0040-FS	TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP30	FTA-GP30-SS-AD0038-REG FTA-GP30-DS-AD0037-REG	0-1 a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP31	FTA-GP31-SS-AD0042-REG FTA-GP31-DS-AD0041-REG	0-1 a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP32	FTA-GP32-SS-AD0044-REG FTA-GP32-DS-AD0043-REG	0-1 a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP33	FTA-GP33-SS-AD0046-REG FTA-GP33-DS-AD0045-REG	0-1 a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP34	FTA-GP34-SS-AD0050-REG FTA-GP34-DS-AD0047-REG	0-1 a	FTA-GP34-DS-AD0048-FD	FTA-GP34-DS-AD0049-FS	TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP35	FTA-GP35-SS-AD0052-REG FTA-GP35-DS-AD0051-REG	0-1 a			TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-GP36	FTA-GP36-SS-AD0054-REG FTA-GP36-DS-AD0052-REG	0-1 a			TCL VOCs, TCL SVOCs, TAL Metals

Table 4-2

Surface and Subsurface Soil Sample Designations and QA/QC Sample Quantities
Former Hospital, Parcel 95(7)
Fort McClellan, Calhoun County, Alabama

(Page 3 of 3)

Sample Location	Sample Designation	Sample Depth (ft)	QA/QC Samples		MS/MSD	Analytical Suite
			Field Duplicates	Field Splits		
FTA-95-GP37	FTA-GP37-SS-AD0056-REG FTA-GP37-DS-AD0055-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP38	FTA-GP38-SS-AD0056-REG FTA-GP38-DS-AD0057-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP39	FTA-GP39-SS-AD0060-REG FTA-GP39-DS-AD0059-REG	0-1 a	FTA-GP39-SS-AD0061-FD	FTA-GP39-SS-AD0062-FS		TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP40	FTA-GP40-SS-AD0064-REG FTA-GP40-DS-AD0063-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP41	FTA-GP41-SS-AD0066-REG FTA-GP41-DS-AD0065-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP42	FTA-GP42-SS-AD0068-REG FTA-GP42-DS-AD0067-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP43	FTA-GP43-SS-AD0070-REG FTA-GP43-DS-AD0069-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP44	FTA-GP44-SS-AD0072-REG FTA-GP44-DS-AD0071-REG	0-1 a	FTA-GP44-SS-AD0073-FD	FTA-GP44-SS-AD0073-FD		TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP45	FTA-GP45-SS-AD0076-REG FTA-GP45-DS-AD0075-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP46	FTA-GP46-SS-AD0078-REG FTA-GP46-DS-AD0077-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP47	FTA-GP47-SS-AD0080-REG FTA-GP47-DS-AD0079-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals
FTA-95-GP48	FTA-GP48-SS-AD0082-REG FTA-GP48-DS-AD0081-REG	0-1 a				TCL VOCs, TAL SVOCs, TAL Metals

^aActual sample depth selected for analysis will be at the discretion of the site geologist and will be based on field observation.

MS/MSD - Matrix spike/matrix spike duplicate.
 QA/QC - Quality assurance/quality control.
 SVOC - Semivolatile organic compound.
 REG - Field sample.
 FS - Field split.
 FD - Field duplicate.

Notes:

For subsurface soil samples, the sample which exhibits the highest organic vapor reading on an PID will be submitted for laboratory analysis.
 Subsurface soil sample depths are approximate.

Table 4-3

Surface Water, Sediment, and Depositional Soil Sample Designations and QA/QC Sample Quantities
Old Hospital, Parcel 95(7)
Fort McClellan, Calhoun County, Alabama

Sample Location	Sample Designation	QA/QC Samples			Analytical Suite
		Field Duplicates	Field Splits	MS/MSD	
FTA-95-SW/SD01	FTA-95-SW/SD01-SW-AD2001-REG				TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD01	FTA-95-SW/SD01-SD-AD1001-REG				TCL VOCs, TCL SVOCs, TAL Metals, TOC, Grain Size
FTA-95-SW/SD02	FTA-95-SW/SD02-SW-AD2002-REG	FTA-95-SW/SD02-SW-AD2003-FD	FTA-95-SW/SD02-SW-AD2004-FS	FTA-95-SW/SD02-SW-AD2002-MS	TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD02	FTA-95-SW/SD02-SD-AD1002-REG			FTA-95-SW/SD02-MSD	TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD03	FTA-95-SW/SD03-SW-AD2005-REG				TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD03	FTA-95-SW/SD03-SD-AD1003-REG	FTA-95-SW/SD03-SD-AD1004-FD	FTA-95-SW/SD03-SD-AD1005-FS	FTA-95-SW/SD03-SD-AD1003-MS	TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD04	FTA-95-SW/SD04-SW-AD2006-REG			FTA-95-SW/SD03-SD-AD1003-MSD	TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD04	FTA-95-SW/SD04-SD-AD1004-REG				TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD05	FTA-95-SW/SD05-SW-AD2007-REG				TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD05	FTA-95-SW/SD05-SD-AD1005-REG				TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD06	FTA-95-SW/SD06-SW-AD2008-REG				TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-SW/SD06	FTA-95-SW/SD06-SD-AD1006-REG				TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-DEP01	FTA-95-DEP01-DEP-AD1006-REG				TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-DEP02	FTA-95-DEP02-DEP-AD1007-REG				TCL VOCs, TCL SVOCs, TAL Metals
FTA-95-DEP03	FTA-95-DEP03-DEP-AD1008-REG				TCL VOCs, TCL SVOCs, TAL Metals

MS/MSD - Matrix spike/matrix spike duplicate.

QA/QC - Quality assurance/quality control.

SVOC - Semivolatile organic compound.

TOC - Total organic carbon using EPA Method 9060.

REG - Field sample.

FD - Field duplicate.

FS - Field split.

TAL - Target analyte list.

TCL - Target compound list.

VOC - Volatile organic compound.

Grain size using ASTM Method D421/D422.

4.2.1 Surface Soil Sampling

Twenty surface soil samples will be collected as part of the SI.

4.2.1.1 Sample Locations and Rationale

A total of 20 surface soil samples will be collected from the upper 1 foot of soil at each sampling location. Samples will be collected using direct-push methodology specified in Section 4.7.1.1 of the SAP. Surface soil sample locations are shown on Figure 4-2.

Aerial photographs were reviewed from 1949 and 1954. Based on the aerial photographs (Figure 4-1), the northern portion of the Old Hospital site has been completely razed and rebuilt. It appears that none of the Old Hospital buildings that were present in 1954 exist at the site today. There is no record of a former incinerator at this site and no apparent evidence of a hazardous waste disposal. Because current surface soils do not reflect conditions present during active use of the Old Hospital, no surface soil samples will be collected in the northern portion of the site. Twenty surface soil samples will be collected from the southern portion of the site. Sample locations will be set on a 200 square foot grid system. Sample locations will be biased within each grid toward former building and catwalk locations as delineated from the 1954 aerial photographs. Surface soil sampling locations and rationale are presented in Table 4-1.

4.2.1.2 Sample Collection

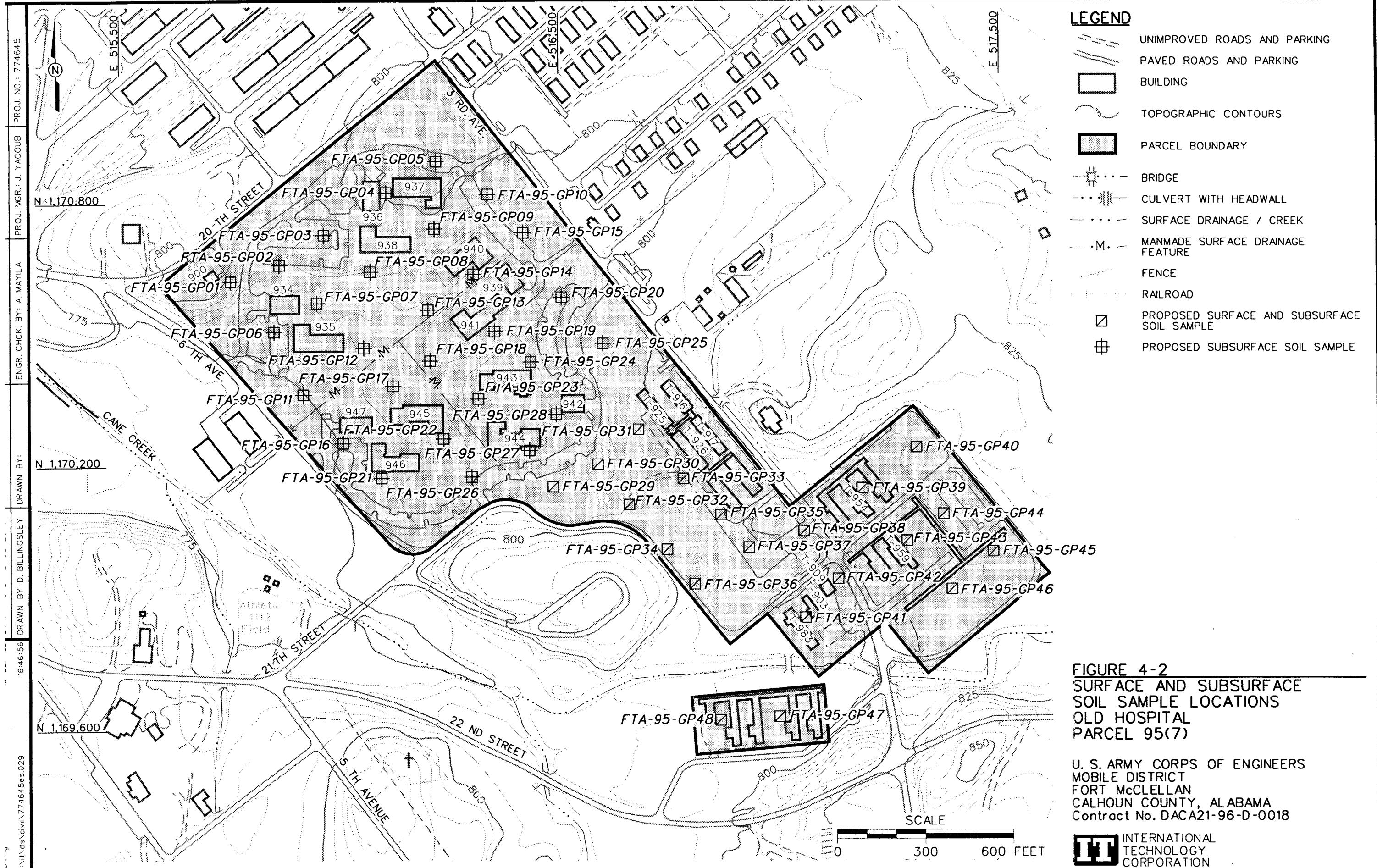
Surface soil samples will be collected from the upper 1 foot of soil by direct-push methodology as specified in Section 4.7.1.1 of the SAP. Collected soil samples will be screened using a photoionization detector (PID) in accordance with Section 4.15 of the SAP. Sample containers, sample volumes, preservatives and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1, of the QAP. Sample documentation and chain-of-custody will be recorded as specified in Section 4.13 of the SAP. The samples will be analyzed for the parameters listed in Section 4.5.

4.2.2 Subsurface Soil Sampling

Forty-eight subsurface soil samples will be collected as part of the SI.

4.2.2.1 Sample Locations and Rationale

A total of 48 subsurface soil samples will be collected from the Old Hospital. Proposed sample locations were selected using a 200 square foot grid system that covers the entire site. Sample locations were also selected within each grid based on the locations of former buildings and



catwalks shown on the 1954 aerial photographs. Subsurface soil sampling locations and rationale are presented in Table 4-1. Subsurface soil sampling locations are shown on Figure 4-2.

4.2.2.2 Sample Collection

Subsurface soil samples will be collected using the direct-push methodology specified in Sections 4.7.1.1 of the SAP.

Subsurface soil samples will be collected from soil borings at depths greater than 1 foot below ground surface in the unsaturated zone. Direct-push sampling methodology, provided in Section 4.7.1.1 of the SAP, will be utilized to advance the soil borings and collect the soil samples.

Table 4-2 provides the sample designations and QA/QC sample quantities.

Soil samples will be collected continuously for the first 12 feet or until either groundwater or refusal is reached. A detailed lithological log will be recorded by the on-site geologist for each borehole. At least one subsurface sample from each borehole will be selected for analyses. The collected subsurface soil samples will be field-screened using a photoionization detector (PID) in accordance with Section 4.15 of the SAP to measure samples exhibiting elevated readings above background. Typically, the subsurface soil sample showing the highest reading will be selected and sent to the laboratory for analysis. If none of the samples indicate readings above background (readings in ambient air) using the PID, the deepest interval from the soil boring will be sampled and submitted to the laboratory for analysis. Subsurface soil samples will be selected for analyses from any depth interval if the on-site geologist suspects PSSC at the interval. Site conditions such as lithology may also determine the actual sample depth interval submitted for analyses. More than one subsurface soil sample will be collected if field measurements and observations indicate a possible layer of PSSC and/or additional sample data would provide insight to the existence of any PSSC.

Sample containers, sample volumes, preservatives and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1, of the QAP. Sample documentation and chain-of-custody will be recorded as specified in Section 4.13 of the SAP. The samples will be analyzed for the parameters listed in Section 4.5.

4.2.3 Surface Water Sampling

Six surface water samples will be collected from Cane Creek as part of the Old Hospital SI.

4.2.3.1 Sample Locations and Rationale

Surface water sampling rationale is presented in Table 4-1. Three surface water samples will be collected from Cane Creek, located approximately 50 feet west of the Old Hospital site. Figure 4-3 shows the proposed surface water sample locations.

4.2.3.2 Sample Collection

Six surface water samples will be collected in areas where surface water runoff is most likely to occur. In the event that Cane Creek is dry, surface water samples will be collected following a rain event. Surface water samples to be collected at the Old Hospital and their designated sample numbers, along with QA/QC sample quantities, are listed in Table 4-3.

Surface water samples will be collected in accordance with the procedures specified in Section 4.9.1.3 of the SAP. Sample documentation and chain-of-custody will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1, of the QAP. The samples will be analyzed for the parameters listed in Section 4.5.

4.2.4 Sediment Sampling

Six sediment samples will be collected from Cane Creek as part of the Old Hospital SI.

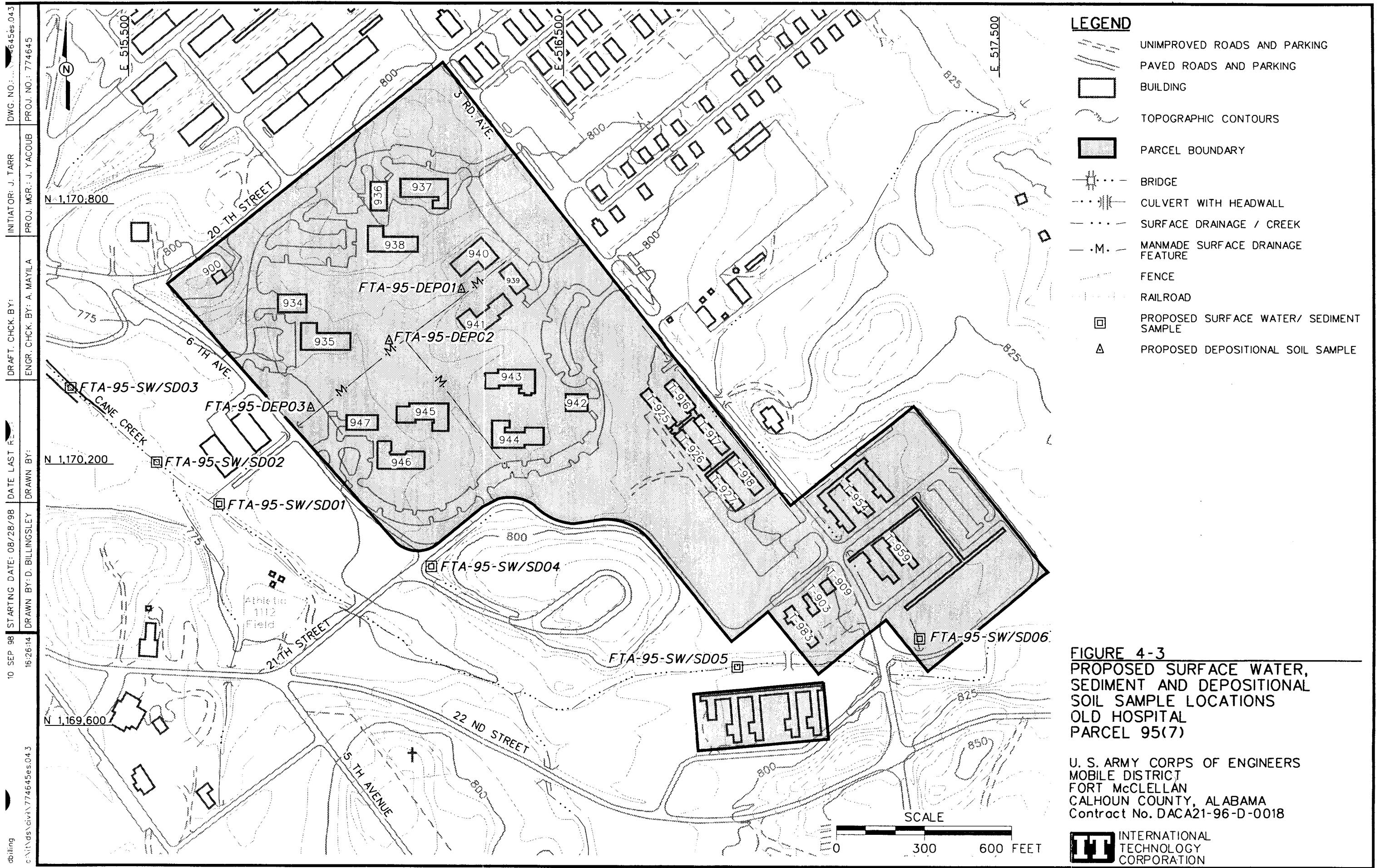
4.2.4.1 Sample Locations and Rationale

Sediment sampling rationale is presented in Table 4-1. A total of six sediment samples will be collected from Cane Creek, located approximately 50 feet west of the Old Hospital site. The sediment samples will be collected at the same locations as the surface water samples. Figure 4-3 shows the proposed sediment sample locations.

4.2.4.2 Sample Collection

Sediment samples to be collected at the Old Hospital site and their designated sample numbers, along with QA/QC sample quantities, are listed in Table 4-3.

Sediment samples will be collected in accordance with the procedures specified in Section 4.9.1.2 of the SAP. Sample documentation and chain-of-custody will be recorded as specified in



Section 4.13 of the SAP. The sediment samples will be analyzed for the parameters listed in Section 4.5.

4.2.5 Depositional Soil Sampling

Three depositional soil samples will be collected as part of this SI.

4.2.5.1 Sample Locations and Rationale

Three depositional soil samples will be collected in locations which represent a lower elevation area where surface runoff could collect, and potentially percolate into the substratum, or potentially deposit dissolved materials after percolation and/or evaporation. Figure 4-3 shows the proposed depositional soil locations.

4.2.5.2 Sample Collection

Depositional soil sample collection will be conducted in accordance with the procedures for surface soil sample collection specified in Section 4.9.1.1 of the SAP. Sample documentation and chain-of-custody will be recorded as specified in Section 4.13 of the SAP. Sample containers, sample volumes, preservatives and holding times for the analyses required in this SFSP are listed in Section 5.0, Table 5-1, of the SAP. The samples will be analyzed for the parameters listed in Section 4.5.

4.3 Decontamination Requirements

Decontamination will be performed on sampling and nonsampling equipment primarily to ensure that contaminants are not introduced into samples from location to location. Decontamination of sampling equipment will be performed in accordance with the requirements presented in Section 4.10.1.1 of the SAP. Decontamination of nonsampling equipment will be performed in accordance with the requirements presented in Section 4.10.1.2 of the SAP.

4.4 Surveying of Sample Locations

Sampling locations will be marked with pin flags, stakes, and/or flagging and will be surveyed using either global positioning system (GPS) or conventional civil survey techniques, as necessary to obtain the required level of accuracy. Horizontal coordinates will be referenced to the Alabama State Plane coordinate system, 1983 North American Datum (NAD83). Elevations will be referenced to the National Geodetic Vertical Datum of 1929 or the North American Vertical Datum of 1988 (soon to be established on-site).

Horizontal coordinates for soil, sediment, and surface water locations will be recorded using a GPS to provide accuracy within 1 meter. Elevations of soil, sediment, and surface water locations will be measured to an accuracy of 0.01 feet.

Procedures to be used for GPS surveying are described in Section 4.3 of the SAP. Conventional land survey requirements are presented in Section 4.19 of the SAP.

4.5 Analytical Program

Samples collected at locations specified in Chapter 4.0 will be analyzed for various physical and chemical properties. The on-site sample coordinator will provide sampling containers, preservatives, and coordinate sampling procedures to the field sampling crews in accordance with Table 5-1 in the QAP. The specific suite of chemicals to be analyzed is based on the PSSC present based on the history of the site and EPA, ADEM, FTMC, and USACE requirements. Target analyses for samples collected from the Old Hospital consist of the following list of parameters:

- TCL VOCs – Method 5035/8260B
- TCL SVOCs – Method 8270C
- TAL Metals – Method 6010B/7000
- Total organic carbon– Method 9060 (sediment only)
- Grain size –American Society for Testing and Materials D421/D422 (sediment only).

The samples will be analyzed using EPA SW-846 methods, including Update III methods where applicable, as presented in Table 4-4 in this SFSP and Table 6-1 in the QAP. Data will be reported and evaluated in accordance with CESAS Level B criteria (USACE, 1994) and the stipulated requirements for the generation of definitive data (Section 3.1.2 of the QAP). The chemical data will be reported via hard copy data packages by the laboratory using CLP-like forms. These packages will be validated in accordance with EPA National Functional Guidelines by Level III criteria.

Table 4-4

Analytical Samples
Old Hospital, Parcel 95(7)
Fort McClellan, Calhoun County, Alabama

Parameters	Analysis Method	Sample Matrix	TAT Needed	Field Samples			QA/QC Samples			QA Lab Analysis		
				No. of Sample Points	No. of Events	No. of Field Samples	Dups (10%)	Field Dups (10%)	Splits w/ QA Lab (10%)	MS/MSD (5%)	Trip Blank (1/ship)	Eq. Rinse (1/wk/matrix)
Old Hospital 95 (7): 20 surface soils, 48 subsurface soil, 6 surface water, 6 sediment, and 3 depositional soil.												
TCL VOCs	8260B	water	normal	6	1	6	1	1	1	1	1	11
TCL SVOCs	8270C	water	normal	6	1	6	1	1	1	1	1	10
Total TAL Metals	6010B/7000	water	normal	6	1	6	1	1	1	1	1	10
TCL VOCs	8260B	soil	normal	77	1	77	7	7	3	1	91	1
TCL SVOCs	8270C	soil	normal	77	1	77	7	7	3	1	91	1
Tot TAL Metals	6010B/7000	soil	normal	77	1	77	7	7	3	1	91	1
TOC	9060	sediment	normal	6	1	6				6	1	1
Grain Size ASTM	D421/D422	sediment	normal	6	1	6				6	1	1
Old Hospital Total:				261		24	24	12	1	6	316	8

Field duplicate, QA split, and MS/MSD samples were calculated as a percentage of the field samples collected per site and were rounded up to the nearest whole number.

Trip blank samples will be collected in association with water matrix samples for VOC analysis only. Assumed 4 field samples per day to estimate trip blanks. Equipment blanks will be collected once per event whenever sampling equipment is field decontaminated and re-used. They will be repeated weekly for sampling events that are anticipated to last more than 1 week. Assumed 20 field samples will be collected per week to estimate number of equipment blanks.

Ship samples to:

Quanterra Environmental Services
5815 Middlebrook Pike
Knoxville, Tennessee 37921
Attn: John Reynolds
Tel: 423-588-6401
Fax: 423-584-4315

USACE Laboratory split samples
are shipped to:

USACE South Atlantic Division Laboratory
Attn: Sample Receiving
611 South Cobb Drive
Marietta, Georgia 30060-3112
Tel: 770-919-5270

QA/QC - Quality assurance/quality control.

MS/MSD - Matrix spike/matrix spike duplicate.

VOC - Volatile organic compound.

SVOC - Semivolatile organic compound.

TAL - Target analyte list.

TCL - Target compound list.

4.6 Sample Preservation, Packaging, and Shipping

Sample preservation, packaging, and shipping will follow the procedures as specified in Section 4.13.2 of the SAP. Completed analysis request/chain-of-custody records will be secured and included with each shipment of coolers to:

Attn: Sample Receiving
Quanterra Environmental Services
5815 Middlebrook Pike
Knoxville, Tennessee 37921
Telephone: (423) 588-6401

Split samples collected for the USACE laboratory will be shipped to the following address:

Sample Receiving
USACE South Atlantic Division Laboratory
611 South Cobb Drive
Marietta, Georgia 30060
Telephone: (770) 919-5270.

4.7 Investigation-Derived Waste Management

Management and disposal of the investigation-derived wastes (IDW) will follow procedures and requirements as described in Section 4.11 and Appendix D of the SAP. The IDW expected to be generated at the Old Hospital will include decontamination fluids and disposable personal protective equipment. The IDW will be staged inside the fenced area surrounding Buildings 335 and 336 while awaiting final disposal.

5.0 Project Schedule

The project schedule for the SI activities will be provided by the IT project manager to the Base Closure Team on a monthly basis.

6.0 References

Environmental Science and Engineering, Inc., 1998, *Final Environmental Baseline Survey, Fort McClellan, Alabama*, prepared for U.S. Army Environmental Center, Aberdeen Proving Ground, Maryland, January.

Fort McClellan (FTMC), 1997, *Fort McClellan Comprehensive Reuse Plan, Fort McClellan Reuse and Redevelopment Authority of Alabama, Implementation Strategy*, November.

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U.S. Environmental Protection Agency (EPA), 1993, *Data Quality Objectives Process for Superfund, Interim Final Guidance*, EPA 540-R-93-071, September.